SINTESA DAN KARAKTERISASI FISIKOKIMIA KITOSAN DARI KULIT UDANG SERTA PENGUKURAN BIOAKTIVITASNYA TERHADAP BAKTERI JERAWAT

SYNTHESIZED AND PHYSICOCHEMICAL CHARACTERIZATION OF CHITOSAN FROM SHRIP SHELL AND IT'S BIOACTIVITY MEASUREMENT AGAINTS ACNE BACTERIES

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Abstract

Chitosan a carbon biopolymer with polycationic groups was synthetized by demineralized, deproteinated and deacetilated shrimp shell to reducing minerals, proteins and acetamine groups. Process of demineralitation using 4% (v/v) hydrochloric acid (HCl), process of deproteination using 5% (w/v) sodium hydroxide (NaOH) and the process of deacetilation using 70% (w/v) sodium hydroxide (NaOH). The aim of this study was to characterize physicochemical and to measure bioactivity shrimp shell chitosan was obtain from synthesis. The result showed that the rendement of synthesis 74,65% ± 2,21; water contains 12,93% ± 0,04; ash contains 0,55% ± 0,10; fat contains 2,09% ± 0,11; protein contains 1,53% ± 0,08; degree of deacetilation 57,6161%; solubility 100% ± 0,00; specific viscosity 0,2238 ± 0,0588 secon; and kinematic viscosity 0,0836 ± 0,0039 centistokes. Bioactivity test showed that the diameter of inhibitory area were 23,45 ± 2,18 mm againts Staphyllococcus aureus and 28.66 ± 1,70 mm againts Staphyllococcus epidermidis.